

GENERAL NOTES:

A. SUB-BASEMENT IS A CRAWL SPACE APPROXIMATELY FOUR (4) FEET HIGH WITH LIMITED CLEARANCE AND LIGHTING. ACCESS TO SUB-BASEMENT CAN BE ACHIEVED THROUGH STAIR NUMBER EIGHT (8), STAIR 'A', AND/OR STAIR 'B'. ALL PIPING SHOWN IS LOCATED BELOW THE BASEMENT IN THE SUB-BASEMENT.

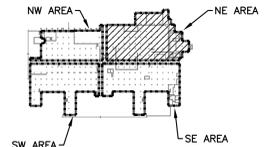
B. CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE SUB-BASEMENT PRIOR TO BIDDING THIS WORK. THE LARGE QUANTITY OF EXISTING PIPE AND CONDUIT WILL REQUIRE MULTIPLE OFFSETS AND CHANGES IN ELEVATION. THE CONTRACTOR SHALL INCORPORATE THESE INTO HIS BID AND COORDINATE THE EXACT ROUTING.

CODED NOTES:

① 3" PCWS/R UP TO BASEMENT. REFER TO PARTIAL BASEMENT PLAN FOR CONTINUATION (DWG 1-M7B). CORE DRILL AND FIRESTOP BASEMENT FLOOR AS REQUIRED FOR INSTALLATION. REFER TO FLOOR PENETRATION DETAIL. FIELD VERIFY EXISTING CONDITIONS.

② CONNECT 2" PCWS/R TO EXISTING 2" CHWS/R PIPING THAT FEEDS AIR CONDITIONING UNITS ON BASEMENT AND FIRST FLOORS (PREVIOUS PROJECT; RADIOLOGY PHASE 2). REMOVE EXISTING CHWS/R BRANCH PIPING BACK TO POINT INDICATED AND CAP. PROVIDE INSULATED CAP. RE-LABEL EXISTING PIPING DOWNSTREAM OF POINT OF CONNECTION FOR PROCESS CHILLED WATER SERVICE. FIELD VERIFY EXISTING CONDITIONS.

PARTIAL SUB-BASEMENT PIPING PLAN - NE AREA
SCALE: 1/8" = 1'-0"



SUB BASEMENT KEY PLAN
SCALE: N.T.S.

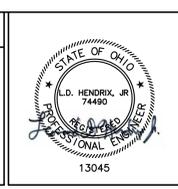
three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

FOR CONSTRUCTION

FULLY SPRINKLERED

Final Construction Documents	04-03-15
Revisions:	Date
1	
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CONSULTANTS:



ARCHITECT/ENGINEER:

FREDRICK, FREDRICK & HELLER ENGINEERS, INC.
672 EAST ROYALTON ROAD
BROADVIEW HTS., OHIO 44147
TEL: (440) 546-9888
FAX: (440) 546-9899

Drawing Title
PARTIAL SUB-BASEMENT PIPING PLAN - NE AREA

Approved: Project Director

Project Title
PROVIDE PROCESS LOOP TIE-INS

Project Number
541-15-203

Building Number
1

Location
VAMC - WADE PARK

Date
04-03-15

Checked
LDH

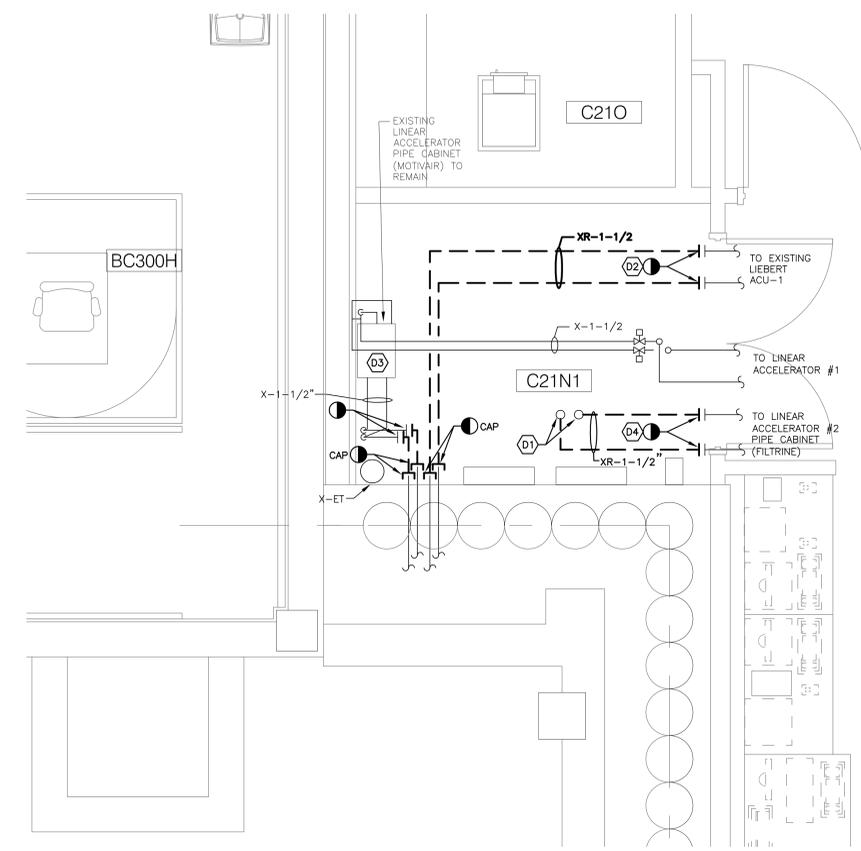
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1-M6B

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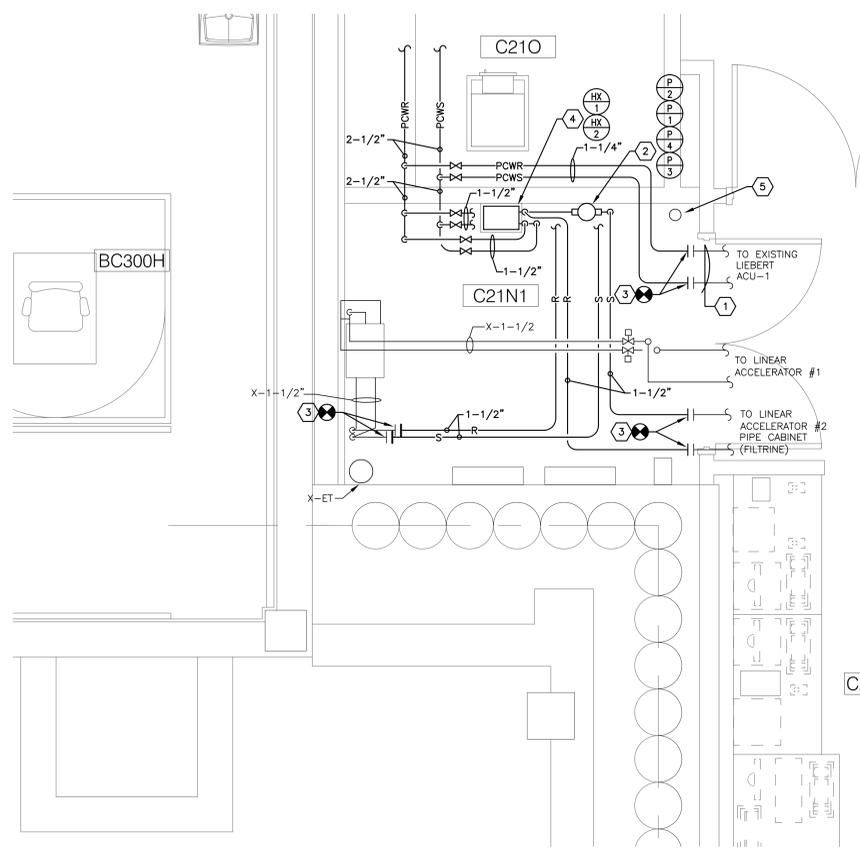
Office of Facilities Management

Department of Veterans Affairs



PARTIAL BASEMENT MECHANICAL DEMOLITION PLAN
 SCALE: 1/2" = 10"
 1

- DEMOLITION CODED NOTES:**
- D1 REMOVE EXISTING CHILLED WATER PIPING TO DECK. DRAIN ABANDONED LINES COMPLETELY AND CAP AND FIRESTOP LINES AT DECK.
 - D2 REMOVE CHILLED WATER LINES TO POINT INDICATED. CLEAN AND FLUSH EXISTING LINES SERVING LIEBERT UNIT. PROVIDE TEMPORARY COOLING, AS NEEDED, TO COMPUTER ROOM SERVED BY LIEBERT UNIT, ACU-1.
 - D3 SWITCH MOTVAIR PIPE CABINET TO DOMESTIC WATER BACK-UP PRIOR TO START OF DEMOLITION WORK. COORDINATE SCHEDULING WITH VA COR AND USER GROUP.
 - D4 REMOVE EXISTING CHILLED WATER PIPING SERVING FILTRINE PIPE CABINET TO POINT INDICATED. SWITCH FILTRINE CABINET TO DOMESTIC WATER BACK-UP PRIOR TO START OF DEMOLITION WORK. COORDINATE SCHEDULING WITH VA COR AND USER GROUP.



PARTIAL BASEMENT PROCESS CHILLED WATER PIPING PLAN
 SCALE: 1/2" = 10"
 2

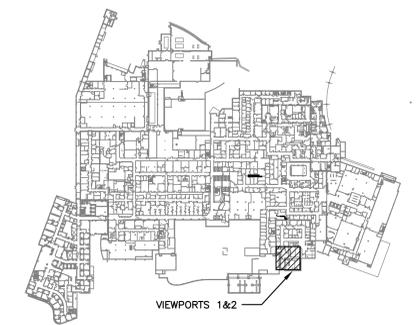
- CODED NOTES:**
- 1 RELABEL PIPING DOWNSTREAM OF POINT OF CONNECTION FOR PCWS/R SERVICE.
 - 2 RACK PUMPS TO WALL WITH FLOOR AND WALL MOUNTED ANGLE IRON FRAME. 4 PUMPS SHALL BE STACKED. PROVIDE PUMP CRADLE AND VIBRATION ISOLATION.
 - 3 FIELD VERIFY WHICH LINES ARE SUPPLY AND RETURN PRIOR TO CONNECTION.
 - 4 MOUNT BOTTOM HEAT EXCHANGER, HX-2, ON CONCRETE PAD. HEAT EXCHANGER HX-1 SHALL BE MOUNTED ABOVE HX-2 WITH FLOOR AND WALL MOUNTED STEEL FRAME.
 - 5 REWORK EXISTING SANITARY STACK AND BRANCH PIPING WITHIN ROOM TO ACCOMMODATE NEW PIPING AND EQUIPMENT.

- GENERAL NOTES:**
- A. WORK ON THIS DRAWING SHALL BE COMPLETED DURING NORMALLY UNOCCUPIED HOURS. COORDINATE WITH VA COR.

DEDUCT ALTERNATE NOTES

AS PART OF DEDUCT ALTERNATE #1:

- A. DELETE ALL DEMOLITION AND NEW WORK TO LINEAR ACCELERATOR #2 CABINET.
- B. VALVE AND CAP 1-1/2" PCWS/PCWR LINES FOR FUTURE. REFERENCE "LINEAR ACCELERATOR PROCESS CHILLED WATER PIPING DETAIL" ON DWG 1-M4 FOR ADDITIONAL INFORMATION.



BASEMENT KEY PLAN
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 3

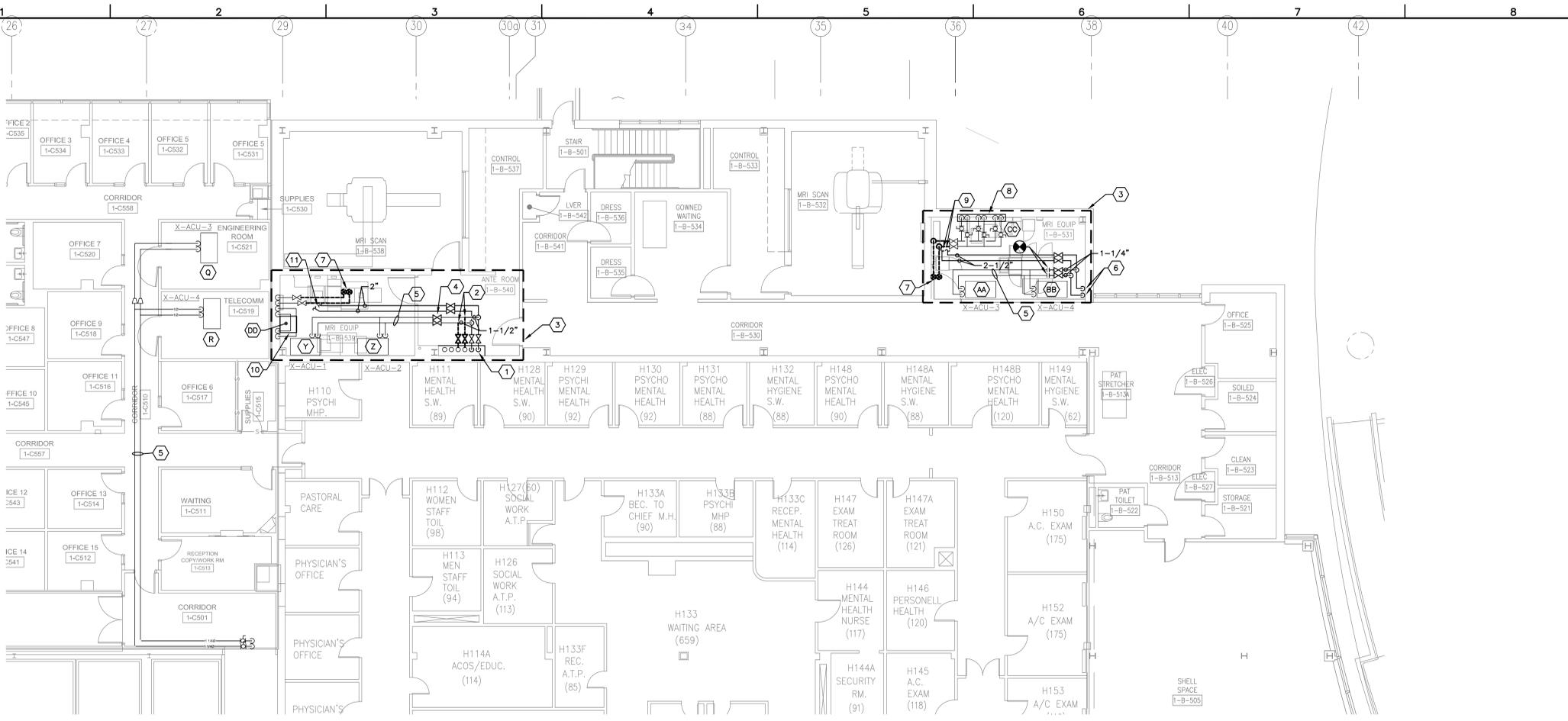
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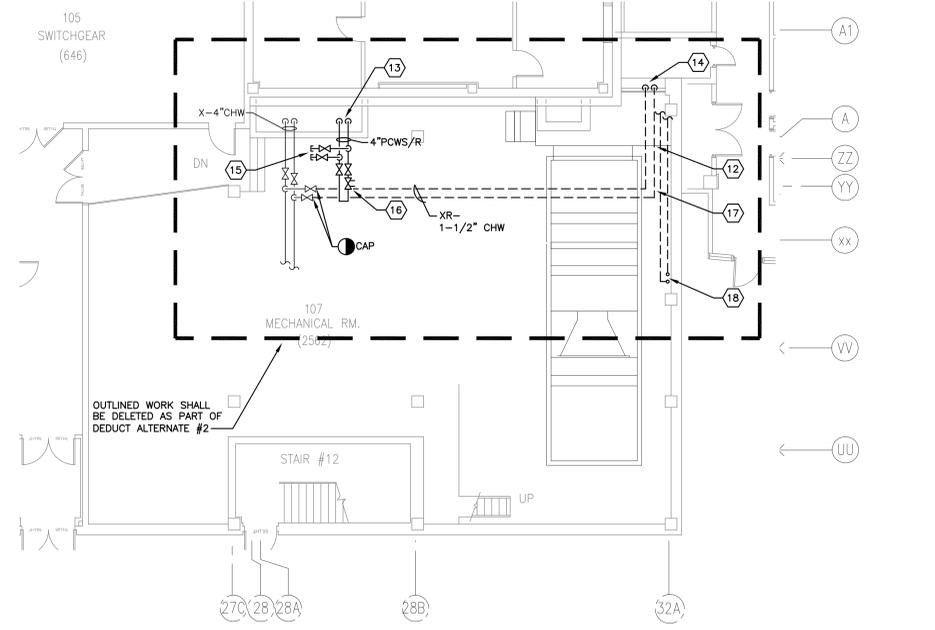
Final Construction Documents	04-03-15	CONSULTANTS:		ARCHITECT/ENGINEER:	<p>FREDRICK, FREDRICK & HELLER ENGINEERS, INC. 672 EAST ROYALTON ROAD BROADVIEW HTS., OHIO 44147 TEL: (440) 546-8888 FAX: (440) 546-8889</p>	Drawing Title	Project Title	Project Number	Office of Facilities Management
						ENLARGED MECHANICAL ROOM CHILLED WATER PIPING PLANS	PROVIDE PROCESS LOOP TIE-INS	541-15-203	
Revisions:	Date					Approved: Project Director	Location	Drawing Number	
							VAMC - WADE PARK	1-M7D	
							Date: 04-03-15	Dwg. of	
							Checked: LDH		
							Drawn: LDH		

- CODED NOTES:**
- 2-1/2" PCWS/R DOWN TO BASEMENT. CORE DRILL AND FIRESTOP PENETRATION. REFER TO PENETRATION DETAIL. FUR OUT EXISTING CHASE IN ORDER TO ENCLOSE NEW PIPING. PROVIDE FINISH TO MATCH EXISTING.
 - CONNECT NEW 1-1/2" PCWS/R BRANCH PIPES TO EXISTING CHWS/R BRANCHES SERVING AC UNITS. CAP CHWS/R BRANCH LINES BACK AT MAIN. PROVIDE INSULATED CAP.
 - REMOVE AND REPLACE EXISTING CEILING AS REQUIRED TO INSTALL PIPING.
 - PROVIDE NEW SHUTOFF VALVES IN BRANCH LINES SERVING AC UNITS.
 - RE-LABEL EXISTING PIPING FOR PROCESS CHILLED WATER SERVICE.
 - 2-1/2" PCWS/R DOWN THROUGH RAISED FLOOR AND FIRST FLOOR SLAB. REMOVE EXISTING CHWS/R PIPING ROUTED ALONG PATH AND REPLACE WITH NEW 2-1/2". CUT AND PATCH FLOOR AS REQUIRED FOR INSTALLATION.
 - REMOVE EXISTING CHILLED WATER PIPING FROM MAIN PIPE MANIFOLD VALVES BACK UP THROUGH ROOF TO EXISTING CHILLER. FIELD VERIFY EXISTING CONDITIONS.
 - EXISTING PHILIPS PIPE MANIFOLD. PRIOR TO START OF DEMOLITION, PIPE MANIFOLD SHALL BE VALVED INTO EMERGENCY DOMESTIC WATER BACK-UP.
 - CONNECT NEW 2-1/2" PCWS/R TO EXISTING PHILIPS MRI EQUIPMENT PIPE MANIFOLD UPSTREAM OF MAIN MANIFOLD VALVES. FIELD VERIFY EXISTING CONDITIONS. PIPING SHALL BE FULLY CLEANED AND FLUSHED PRIOR TO RE-FILL. PROVIDE TEMPERATURE GAUGES AND PETE'S PLUGS ON THE SUPPLY AND RETURN LINES. MOUNT GAUGES AND PORTS IN MAINS BELOW CEILING LEVEL.
 - EXISTING DRAKE HEAT EXCHANGER MODULE TO BE REMOVED. CONTRACTOR SHALL PROVIDE REPLACEMENT WATER-TO-WATER HEAT EXCHANGER PACKAGE (DRAKE MODEL D500-871). REFER TO GENERAL NOTES, THIS DRAWING, FOR ADDITIONAL INFORMATION. FIELD VERIFY EXISTING CONDITIONS IN ORDER TO DETERMINE COURSE OF ACTION FOR REPLACEMENT HEAT EXCHANGER PACKAGE. PROVIDE TEMPERATURE GAUGES AND PETE'S PLUGS ON THE SUPPLY AND RETURN LINES FEEDING NEW HEAT EXCHANGER PACKAGE. MOUNT GAUGES AND PORTS IN MAINS BELOW CEILING LEVEL.
 - CONNECT NEW 2" PCWS/R TO EXISTING TOSHIBA MRI CHILLED WATER VALVES UPSTREAM OF HEAT EXCHANGER. FIELD VERIFY EXISTING CONDITIONS.
 - CAP PLENUM AT PENETRATIONS WITH 2-INCH THICK, INSULATED PANEL. CAP WEATHERTIGHT.
 - 4" PCWS/R DOWN THROUGH PIPE CHASE TO SUB-BASEMENT. REFER TO PARTIAL SUB-BASEMENT PLAN, DWG 1-M8A FOR CONTINUATION. PIPE CHASE IS CONGESTED. CONTRACTOR SHALL FABRICATE PIPE AND INSULATION AS REQUIRED TO INSTALL PIPING. MOVE EXISTING PIPE AND HANGERS AND REMOVE AND REPLACE WALLS OF CHASE TO FACILITATE THE INSTALLATION OF THE NEW PIPING.
 - REMOVE EXISTING CHILLED WATER LINES THROUGH INTAKE PLENUM AND INTAKE SHAFT. CAP LINES AT SLAB PENETRATIONS WATER TIGHT.
 - 2" PCWS/R VALVED AND CAPPED FOR FUTURE.
 - 4" PCWS/R VALVES FOR FUTURE. PROVIDE BALANCE VALVE FOR RECIRCULATION. BALANCE TO 3 GPM.
 - REMOVE EXISTING 1-1/2" CHWS/R PIPING FROM MECH RM 107 DOWN TO BASEMENT LEVEL. FIELD VERIFY EXISTING CONDITIONS.
 - REMOVE EXISTING CHWS/R FROM ROOFTOP CHILLER (MOTVAIR) DOWN TO BASEMENT LEVEL. REMOVE PIPING COMPLETELY BACK TO ROOF-MOUNTED CHILLER. REFER TO ROOF PLAN, DRAWING 1-M10 FOR CONTINUATION.

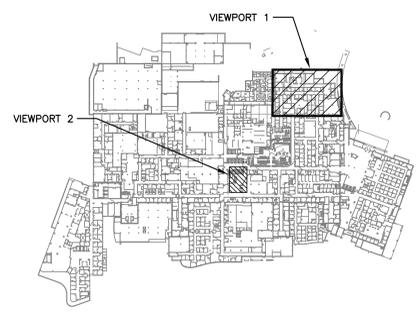
- GENERAL NOTES:**
- CONTRACTOR SHALL CLOSELY COORDINATE SHUTDOWNS WITH VA COR AND RADIOLOGY STAFF.
 - MRI SHUTDOWNS SHALL BE KEPT TO AN ABSOLUTE MINIMUM. COORDINATE CLOSELY SYSTEM DOWNTIME CAPABILITIES WITH VA COR, RADIOLOGY STAFF, AND TOSHIBA AND PHILIPS MRI VENDOR REPRESENTATIVES. WHERE POSSIBLE TO PROVIDE DOMESTIC WATER BACK-UP DURING CONSTRUCTION, CONTRACTOR SHALL COORDINATE THIS WORK WITH RADIOLOGY STAFF AND VENDOR.
 - NEW WATER-TO-WATER HEAT EXCHANGER SHALL BE DRAKE, MODEL D500-871. NEW HEAT EXCHANGER PACKAGE SHALL BE 460V/3PH/60HZ AND SHALL BE FULLY EQUIPPED WITH THE FOLLOWING:
 - CHILLED WATER CONTROL VALVE
 - WATER-TO-WATER HEAT EXCHANGER
 - BYPASS RELIEF VALVE
 - 2 HP CIRCULATION PUMP
 - HOSE BIBB CONNECTIONS
 - PRESSURE RELIEF VALVE
 - FLOW SWITCH
 - THERMOSTAT
 - HIGH LIMIT THERMOSTAT
 - DIGITAL OUTLET TEMPERATURE INDICATOR
 ALL PIPING SHALL BE FULLY INSULATED PER SPECIFICATIONS. PIPING SHALL BE FLUSHED AND FILLED PER SPECIFICATIONS. FILL EQUIPMENT SIDE WITH REQUIRED WATER TYPE (REFER TO RADIOLOGY STAFF).



PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLAN
 SCALE: 1/8" = 10"
 1



PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLAN
 SCALE: 1/8" = 10"
 2

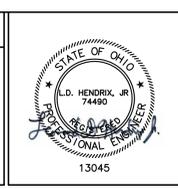


FIRST FLOOR KEY PLAN
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 672 EAST ROYALTON ROAD
 BROADVIEW HTS., OHIO 44147
 TEL: (440) 546-8686
 FAX: (440) 546-8688

Drawing Title
PARTIAL FIRST FLOOR PROCESS CHILLED WATER PIPING PLANS

Approved: Project Director

Project Title
PROVIDE PROCESS LOOP TIE-INS

Location
VAMC - WADE PARK

Date
 04-03-15

Checked
 LDH

Drawn
 LDH

Project Number
 541-15-203

Building Number
 1

Drawing Number
1-M8

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Office of Facilities Management

Department of Veterans Affairs